

- ❖ working with other government agencies to identify flood-prone areas and ensure that new housing developments are built away from them. Controls to restrict or prohibit such developments are being incorporated into local municipal by-laws;
- ❖ developing fish and wildlife management strategies which consider the character of the system, including rebuilding spawning areas to compensate for low levels, blocking fish access to areas known to dry out in spawning season, and stocking fish to make up for losses;
- ❖ incorporating fish and wildlife habitat considerations into system operating plans;
- ❖ improving flood forecasting and high water warnings to allow residents and cottagers to take appropriate action to protect their property; and
- ❖ developing communication tools to inform the public about water levels and flows on lakes and rivers.

By carrying out these initiatives, the Ministry of Natural Resources and Ontario Hydro are jointly committed to the stewardship of the Madawaska River to balance the environmental, recreational and commercial needs of all stakeholders.

WOULD YOU LIKE TO KNOW MORE?

For more information about the Madawaska River watershed, please contact:

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Madawaska River

A SHARED RESOURCE

*The Ministry of Natural
Resources &
Ontario Hydro
cooperate to optimize
& balance the benefits
of fish and wildlife
resources, power production,
recreation & flood
control on the
Madawaska River.*

Ontario Hydro

THE MADAWASKA RIVER - A RESOURCE FOR ALL

From its source in the Precambrian Highlands of Algonquin Park, along its 225 kilometre journey through the rugged splendour of the Madawaska Valley to its outflow into the Ottawa River, the Madawaska River provides many benefits for the people of Ontario. Once a "water-borne" highway for the nineteenth century logging industry, it now serves as a recreational haven for a variety of activities such as white-water kayaking, fishing, hunting, trapping and cottaging; a valued source of hydroelectric power and home to a variety of fish and wildlife species - all in a watershed with a total drainage area of over 8,500 square kilometres.

The log-driving dams and flumes of the 1800's have been replaced with modern water control structures, dams on most of the major lakes and hydroelectric generating stations at Mountain Chute, Barrett Chute, Calabogie, Stewartville and Arnprior. The Ministry of Natural Resources (MNR) controls most of the upstream dams while Ontario Hydro controls major dams at Bark Lake and Palmer Rapids and at the five generating stations.

FORECASTING

The amount of water available in the Madawaska River watershed is dependent on the amount of precipitation provided by nature. Because of the unpredictability of supply, watershed management is, at best, a balancing act, despite all technological advances. Managing this river system includes considering a range of possible conditions and the needs of competing users to plan the best use of available resources, allowing a safety margin for high or low extremes. The Ministry of Natural Resources and Ontario Hydro cooperate to make the best possible decisions under the prevailing conditions.

OPERATING THE SYSTEM

The Ministry of Natural Resources operates several control dams in and around Algonquin Park to provide downstream flows, help control flooding and protect fish habitat. Water management in the park preserves water quality and conserves natural, recreational and cultural features.

Ontario Hydro has an overall operating plan for the Madawaska watershed, comprising desired water level ranges for each reservoir in the river system, which evolved as a result of

changing priorities over the years. The plan identifies zones representing high, normal and low water levels. "Normal Operating Zone" is the range of water levels which best meet the needs of most users during the year. The general pattern includes a gradual decrease in water levels in the fall and winter, then reservoirs are filled up during the spring freshet and relatively constant water levels are seen in the summer. Allowances are made in the plan for water level fluctuations and the unique situation in each reservoir, to account for weather changes and hydroelectric generation operations.

A BALANCING ACT

Managing the water levels in this system to meet the needs of all users presents a constant challenge to those charged with the stewardship of the river. The Ministry of Natural Resources and Ontario Hydro are currently conducting a review of the Madawaska River watershed to improve its management now, and in the future. Given the physical limitations and competing user demands on the ecosystem, the planning process will include:

- ♦ updating the operating plans for the system to maintain levels according to each lake's characteristics, time of year and user needs;